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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/511,749

10/19/2004

Daisuke Adachi

43890-700

4951

7590 03/23/2010  
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EXAMINER

RAYMOND, BRITTANY L

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

03/23/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/511,749	<b>Applicant(s)</b> ADACHI, DAISUKE	
	<b>Examiner</b> BRITTANY RAYMOND	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,8 and 9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,8 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                     |                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                         | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. Claims 1, 2, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki (U.S. Patent 5008166) in view of Kim (U.S. Patent Publication 2003/0215747)

Aoki discloses a manufacturing method of a color filter comprising: forming a photosensitive dyeable layer over signal electrodes on a substrate, irradiating light onto a portion of the dyeable layer using a photomask, moving the photomask by a certain distance, and irradiating the dyeable layer with light a second time (Col. 5, Line 60-Col. 6, Line 26), as recited in claims 1 and 2 of the present invention. Aoki also discloses that the distance the photomask is moved is set to a value larger than any dust that may adhere to the photomask (Col. 6, Lines 26-29), as recited in claims 1 and 2 of the present invention. Aoki states that the mask can be moved in a longitudinal direction or

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by three pitches of the filter elements (Col. 6, Lines 21-24 and Col. 7, Lines 31-34), as recited in claim 2 of the present invention. Aoki also states that the photomask can essentially be moved in any way, if some of the corresponding filter elements are overlapped for exposure (Col. 8, Lines 47-49), as recited in claims 1 and 2 of the present invention.

Aoki fails to disclose that the exposure method is used to form structures or electrodes of a plasma display panel, and that the electrodes are address electrodes, which are formed by exposing a photosensitive silver paste on a substrate.

Kim discloses a process of forming an address electrode on a plasma display panel comprising: printing the whole surface of a substrate with a photosensitive electrode paste, drying the paste, lining up a photomask corresponding to the electrode pattern, irradiating the paste to light through the photomask, applying a development solvent to the paste to remove non-exposed areas, and heating the paste to obtain the electrode (Paragraph 0047), as recited in claims 1, 2, 8 and 9 of the present invention. Kim also discloses that the photosensitive electrode paste comprises silver powder (Paragraph 0040), as recited in claims 8 and 9 of the present invention.

It would have been obvious to one of ordinary skill in the art, at the time of invention by applicant, to have formed electrodes on a plasma display panel using the process of Aoki, as suggested by Kim, because Kim teaches that structures on a plasma display are also formed by exposing and patterning a photosensitive layer through a photomask, which can be subjected to dust particles. It also would have been obvious to one of ordinary skill in the art to have formed the electrodes with a silver

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paste, as suggested by Kim, because Kim teaches that silver is a common material used in the formation of accurate address electrodes of a plasma display panel.

### ***Response to Arguments***

3. Applicant's arguments filed 12/29/2009 have been fully considered but they are not persuasive.

Applicant argues that Aoki does not teach moving a photomask and the photosensitive material in the widthwise direction relative to each other by a distance less than  $w$  between the first and second exposures. Aoki teaches that the distance the photomask is moved is set to a value larger than any dust that may adhere to the photomask (Col. 6, Lines 26-29). It is apparent from Figures 7 and 8 that dust particles are generally much smaller than each electrode. Therefore, it would have been obvious to one of ordinary skill in the art, that the photomask could be moved only a small amount, which would be smaller than the width of the electrode. Aoki also makes it clear that the order of the filter elements is important in the process and the direction and distance that the photomask is moved between exposures. Therefore, it would have been obvious to one of ordinary skill in the art, that the photomask could be moved a small amount in either direction, depending on the type of structure being formed on the substrate.

Applicant also argues that Aoki fails to disclose moving a photomask and photosensitive material relative to each other by two or more integral times the distance  $p$ , wherein  $p$  is the pitch between exposure parts of the photomask. Aoki teaches that the photomask may be moved in any way, if some of the corresponding filter elements

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are overlapped for exposure. It is apparent from the Figures of Aoki that there are several sets of filter elements on the substrate. Therefore, as long as the different colored elements match up after moving the photomask, the photomask could be moved any distance. Since there are numerous filter elements along the substrate, the photomask could be moved down the substrate by a few sets of the filter elements. This would be equivalent to two or more integral times the distance  $p$  of the photomask.

Kim is relied upon to teach that the process can be used to form address electrodes, and that the photosensitive layer can contain silver powder.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRITTANY RAYMOND whose telephone number is

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(571)272-6545. The examiner can normally be reached on Monday through Friday, 9:00 a.m. - 5:30 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/Kathleen Duda/  
Primary Examiner, Art Unit 1795**

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